WHAT IS CLAIMED IS:

1.   A method for determining object-zone intersections for objects in a scene comprising:

defining a visible region in screen coordinates using a first rectangle;

handling buffer resolutions using a second rectangle and an area threshold;

discarding objects completely outside the first rectangle in one or more directions; and

subjecting non-discarded objects to bin determination.

2.   The method of claim 1 wherein the first rectangle coincides with the extent of a color buffer.

3.   The method of claim1 wherein the first and second rectangles are defined by graphics device state variables containing screen space location of rectangle corners.

4.   The method of claim 1 wherein handling color buffer resolutions using a second rectangle and threshold further comprises:

rendering portions of the scene non-optimally when the buffer resolution exceeds the threshold.

5.   The method of claim 4 wherein rendering portions of the scene non-optimally when the buffer resolution exceeds the threshold further comprises:

rendering zones larger than optimal zone size.

6.   The method of claim 1 wherein handling color buffer resolutions using a second rectangle and a threshold further comprises:

configuring all zones spanned by the first rectangle in the second rectangle when the buffer resolution is at or below the threshold.

7.   The method of claim 1 further comprising positioning the second rectangle comprising:

aligning an origin corner of the second rectangle to a zone; and

configuring a width of the second rectangle to be a multiple of a zone width.

8.   The method of claim 7 wherein positioning the second rectangle further comprises:

zone aligning corners in X and Y; and

configuring a total area of the second rectangle to be equal or less than the threshold.

9.   The method of claim 1 further comprising:

extending zones along the edges of the second rectangle out to first rectangle boundaries to define zones larger than optimal zone size when the second rectangle is smaller than the first rectangle.

10.   The method of claim 1 further comprising:

configuring zones having a same size when the first and second rectangle coincide.

11   A machine readable medium having stored therein a plurality of machine readable instructions executable by a processor to determine object-zone intersections for objects in a scene comprising:

instructions to define a visible region in screen coordinates using a first rectangle;

instructions to handle buffer resolutions using a second rectangle and an area threshold;

instructions to discard objects completely outside the first rectangle in one or more directions; and

instructions to subject non-discarded objects to bin determination.

16

12.   The machine readable medium method of claim 11 wherein the first rectangle coincides with the extent of a color buffer.

13.   The machine readable medium method of claim 11 wherein the first and second rectangles are defined by graphics device state variables containing screen space location of rectangle corners.

14.   The machine readable medium method of claim 11 wherein instructions to handle color buffer resolutions using a second rectangle and threshold further comprises:
        instructions to render portions of the scene non-optimally when the buffer resolution exceeds the threshold.

15.   The machine readable medium method of claim 14 wherein instructions to render portions of the scene non-optimally when the buffer resolution exceeds the threshold further comprises:
        instructions to render zones larger than optimal zone size.

16.   The machine readable medium method of claim 11 wherein instructions to handle buffer resolutions using a second rectangle and a threshold further comprises:
        instructions to configure all zones spanned by the first rectangle in the second rectangle when the buffer resolution is at or below the threshold.

17.   The machine readable medium method of claim 11 further comprising instructions to position the second rectangle comprising:
        instructions to align an origin corner of the second rectangle to a zone; and
        instructions to configure a width of the second rectangle to be a multiple of a zone width.

18.   The machine readable medium method of claim 17 wherein instructions to position the second rectangle further comprises:

instructions to zone align corners in X and Y; and

instructions to configure a total area of the second rectangle to be equal or less than the threshold.

19.   The machine readable medium of claim 11 further comprising:

instructions to extend zones along the edges of the second rectangle out to first rectangle boundaries to define zones larger than optimal zone size when the second rectangle is smaller than the first rectangle.

20.   The machine readable medium of claim 11 further comprising:

instructions to configure zones having a same size when the first and second rectangle coincide.

21.   An apparatus to determine object-zone intersections for objects in a scene comprising:

a first rectangle to define a visible region in screen coordinates; and

a second rectangle to handle buffer resolutions based on an area threshold, wherein objects completely outside the first rectangle in one or more directions are discarded and non-discarded objects are subject to bin determination.

22.   The apparatus of claim 21 wherein the first rectangle coincides with the extent of a color buffer.

23.   The apparatus of claim 21 wherein the first and second rectangles are defined by graphics device state variables containing screen space location of rectangle corners.

24.   The apparatus of claim 21 further comprising:

a device to render portions of the scene non-optimally when the buffer resolution exceeds the threshold.

25. The apparatus of claim 24 wherein the device renders zones larger than optimal zone size.